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Linker Molecules for Selective Metallisation of Nucleic Acids and Their Uses

ABSTRACT

The present invention is related to the linker molecules comprising one or more nucleic acid binding group and one or more nanoparticle binding group which are connected covalently by a spacer group. The problem underlying the present invention is to provide methods for the controlled and selective metallisation of nucleic acids, the production of nanowires which may be used, e. g., in the formation of electronic networks and circuits allowing a high density arrangement, and the components of devices that may be incorporated in such networks and circuits. This problem is solved by a linker molecule which comprises one or more nucleic acid binding group(s) and one or more nanoparticle binding group(s) which are connected covalently by a spacer group. Such linkers can be used for the manufacture of nucleic acid/linker conjugates, nanoparticle/linker conjugates, and nanoparticle/linker/nucleic acid composites and further nanowires, electronic networks, electronic circuits and junctions comprising said nanowires.

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